

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

AEGIS 11 S.A.,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 19-1161-RGA
)	
BELKIN INTERNATIONAL, INC.,)	
)	
Defendant.)	
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AEGIS 11 S.A.,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 19-1162-RGA
)	
NETGEAR, INC.,)	
)	
Defendant.)	
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AEGIS 11 S.A.,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 19-1163-RGA
)	
ROKU, INC.,)	
)	
Defendant.)	
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REPORT AND RECOMMENDATION

I. INTRODUCTION

Presently before the court in these patent infringement actions are the partial motions to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(6), filed by defendants Belkin International, Inc.; Netgear, Inc.; and Roku, Inc. (collectively, “Defendants”).¹ (C.A. No. 19-

¹ The briefing and related filings associated with the pending motions are found in Civil Action No. 19-1161-RGA at D.I. 11, D.I. 17, D.I. 18, and D.I. 20. All references to D.I. numbers herein

1161-RGA, D.I. 10; C.A. No. 19-1162-RGA, D.I. 10; C.A. No. 19-1163-RGA, D.I. 8) For the following reasons, I recommend that the court GRANT the pending motions.

II. BACKGROUND

Plaintiff Aegis 11 S.A. (“Plaintiff”) filed these patent infringement suits on June 21, 2019, alleging infringement of three patents: United States Patent Nos. 6,839,553 (“the ’553 patent”), 9,848,443, and 9,584,200 (collectively, the “patents-in-suit”). (D.I. 1) On October 15, 2019, Defendants filed the pending partial motions to dismiss, alleging that claim 1 of the ’553 patent is directed to unpatentable subject matter pursuant to 35 U.S.C. § 101. (D.I. 10)

The ’553 patent, entitled “METHOD OF MANAGING MOBILE STATION OPERATIONAL PARAMETERS,” issued on January 4, 2005 and was acquired by Plaintiff in June 2019. (D.I. 1 at ¶¶ 22, 25) The ’553 patent is directed to a method of mutual authentication between a wireless network and a mobile station. (D.I. 1 at ¶¶ 28-31; ’553 patent, Abstract; col. 1:8-15) Claim 1 of the ’553 patent recites:

1. A method of managing mobile station operational parameters in a wireless communication network comprising:

transmitting a message from a network to a mobile station to indicate an initiation of an update of the mobile station operational parameters; and

updating the mobile station operational parameters after completing a mutual authentication between the mobile station and the network, wherein the mutual authentication comprises each of an authentication of the mobile station by the network and an authentication of the network by the mobile station, and wherein the mutual authentication is performed by generating at least one random number by each of the network and the mobile station.

refer to the docket in C.A. No. 19-1161-RGA, unless otherwise noted. This ruling does not address the motion previously pending in Civil Action No. 19-1164-RGA because that action was dismissed with prejudice on June 23, 2020. (C.A. No. 19-1164-RGA, D.I. 26)

(’553 patent, col. 8:44-58) The complaint alleges that the claimed technologies “are a required part of Wi-Fi Protected Access 2 (‘WPA2’) and Wi-Fi Protected Access 3 (‘WPA3’) network security protocols” that were incorporated into the 802.11 Wi-Fi industry standard issued by the Institute of Electrical and Electronics Engineers (“IEEE”). (D.I. 1 at ¶ 27)

The specification explains that the ’553 patent addresses a problem in existing Over-the-Air Parameter Administration (“OTAPA”) systems and methods, which could authenticate the wireless communication network but did not include an authentication procedure for a mobile station. (’553 patent, col. 1:42-46) According to the ’553 patent specification, the one-way OTAPA authentication process left the mobile station operational parameters vulnerable to change by unauthorized users. Although these vulnerabilities could be addressed by authenticating the mobile station in a process performed before the OTAPA process, this independent authentication of the mobile stations was inefficient because it lengthened the OTAPA process and increased the load in the communication network. (*Id.*, col. 1:46-59) The specification describes a method to overcome these disadvantages by generating random numbers to mutually authenticate the wireless communication network and the mobile station. (*Id.*, cols. 2:31-3:4)

III. LEGAL STANDARDS

A. Failure to State a Claim

Defendants move to dismiss the pending actions pursuant to Rule 12(b)(6), which permits a party to seek dismissal of a complaint for failure to state a claim upon which relief can be granted. Fed. R. Civ. P. 12(b)(6). According to Defendants, Plaintiff’s complaints fail to state a claim with respect to claim 1 of the ’553 patent because the patent is ineligible for protection under 35 U.S.C. § 101. Patent eligibility under 35 U.S.C. § 101 is a threshold test. *Bilski v.*

Kappos, 561 U.S. 593, 602 (2010). Therefore, “patent eligibility can be determined at the Rule 12(b)(6) stage . . . when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

When considering a Rule 12(b)(6) motion to dismiss, the court must accept as true all factual allegations in the complaint and view them in the light most favorable to the plaintiff. *Umland v. Planco Fin. Servs.*, 542 F.3d 59, 64 (3d Cir. 2008). Dismissal under Rule 12(b)(6) is only appropriate if the complaint does not contain “sufficient factual matter, accepted as true, to ‘state a claim to relief that is plausible on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)); *see also Fowler v. UPMC Shadyside*, 578 F.3d 203, 210 (3d Cir. 2009). However, “a court need not ‘accept as true allegations that contradict matters properly subject to judicial notice or by exhibit,’ such as the claims and the patent specification.” *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 913 (Fed. Cir. 2017) (quoting *Anderson v. Kimberly-Clark Corp.*, 570 F. App’x 927, 931 (Fed. Cir. 2014)).

B. Patent-Eligible Subject Matter

Section 101 of the Patent Act provides that patentable subject matter extends to four broad categories: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The Supreme Court recognizes three exceptions to the subject matter eligibility requirements of § 101: laws of nature, physical phenomena, and abstract ideas. *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 218 (2014). The purpose of these exceptions is to protect the “basic tools of

scientific and technological work,” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012), which are “part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none,” *Bilski*, 561 U.S. at 602 (internal quotation marks and citations omitted).

The Supreme Court articulated a two-step “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 573 U.S. at 217; *see also Mayo*, 566 U.S. at 77-78. At step one, the court must determine whether the claims are directed to one of the three patent-ineligible concepts. *Alice*, 573 U.S. at 217. If the claims are not directed to a patent-ineligible concept, “the claims satisfy § 101 and [the court] need not proceed to the second step.” *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018). If the claims are directed to a patent-ineligible concept, the court must proceed to the second step by identifying an “‘inventive concept’—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Alice*, 573 U.S. at 218-19 (quoting *Mayo*, 566 U.S. at 72-73).

At step one, “the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015); *see also Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (“The ‘abstract idea’ step of the inquiry calls upon us to look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.”). However, “courts must be careful to avoid oversimplifying the claims by looking at them generally and failing to account for the specific requirements of the claims.” *McRO, Inc. v. Bandai Namco Games Am.*

Inc., 837 F.3d 1299, 1313 (Fed. Cir. 2016) (internal quotation marks omitted). “At step one, therefore, it is not enough to merely identify a patent-ineligible concept underlying the claim; [courts] must determine whether that patent-ineligible concept is what the claim is ‘directed to.’” *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed. Cir. 2016).

At step two, the court must “look to both the claim as a whole and the individual claim elements” to determine whether they “amount[] to significantly more than a patent upon the ineligible concept itself.” *McRO*, 837 F.3d at 1312. “Simply appending conventional steps, specified at a high level of generality, [is] not enough to supply an inventive concept.” *Alice*, 573 U.S. at 222 (internal quotation marks omitted). Instead, the claim elements must “involve more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (citation and internal quotation marks omitted); *see also Mayo*, 566 U.S. at 73. “The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. . . . [A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

IV. DISCUSSION

A. *Alice* Step One

At step one, Defendants contend that claim 1 of the ’553 patent is directed to the abstract idea of generating and using random numbers for the purpose of mutual authentication. (D.I. 11 at 9) In response, Plaintiff presents two arguments. First, Plaintiff argues that Defendants’ distillation of the claim ignores essential claim elements and requires the court to draw factual

inferences in favor of Defendants. (D.I. 17 at 7-9) Second, Plaintiff alleges that claim 1 of the '553 patent is not abstract because it is directed to an improvement to technology. (*Id.* at 10-13)

The claim language and specification support Defendants' position that claim 1 of the '553 patent is directed to the abstract idea of generating and using random numbers for the purpose of mutual authentication. Defendants' distillation of the abstract idea closely tracks the claim language describing the mutual authentication process as "compris[ing] each of an authentication of the mobile station by the network and an authentication of the network by the mobile station, and wherein the mutual authentication is performed by generating at least one random number by each of the network and the mobile station." ('553 patent, col. 8:50-58) "[W]here, as here, the abstract idea tracks the claim language and accurately captures . . . the 'focus of the claimed advance over the prior art,' characterizing the claim as being directed to an abstract idea is appropriate." *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019) (quoting *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016)).

The specification confirms that the claimed mutual authentication process is the focus of the claimed advance over the prior art. The Abstract broadly describes the invention as being directed to a "method allow[ing] a mutual authentication while maintaining the updating procedure of the mobile station operational parameters in the conventional procedure." ('553 patent, Abstract) The specification then references the OTAPA standard disclosed in IS-725-A, acknowledging that "a technology which allows changing of specific parameters of the mobile station by wireless communication has been developed." (*Id.*, col. 1:35-41) But the OTAPA process only included a one-way authentication procedure for the wireless communication network, and not for the mobile station, which opened the door for unauthorized users to receive illegal communication service. (*Id.*, col. 1:42-50) To authenticate the mobile station and prevent

illegal usage of the network, a separate authentication procedure needed to be performed prior to the OTAPA process. (*Id.*, col. 1:53-57) This independent authentication process for the mobile station resulted in the elongation of the OTAPA process and an increased load in the wireless communication network. (*Id.*, col. 1:53-59) The specification describes the claimed mutual authentication procedure as a means to overcome these problems with the one-way OTAPA authentication process.² (*Id.*, col. 2:6-11)

To rebut Defendants' step one argument, Plaintiff argues that claim 1 of the '553 patent represents an improvement to technology because it recites "an efficient and more secure improvement to the process of wirelessly managing mobile station operational parameters on a wireless network." (D.I. 17 at 11) But the '553 patent specification acknowledges that the

² In support of its position that claim 1 of the '553 patent is innovative as opposed to conventional, Plaintiff argues that the IS-725-A standard does not qualify as prior art due to the March 3, 1999 priority date of the '553 patent and the subsequent April 13, 1999 date of the IS-725-A standard. (D.I. 17 at 8) Plaintiff's argument on this point is contradicted by its own pleading, which expressly characterizes the OTAPA process as prior art: "As the '553 patent explains, one of the limitations of the *prior art* regarding authentication for over-the-air updates was that an authentication procedure performed independently at the mobile station would elongate the update process and increase the load in the network." (D.I. 1 at ¶ 29 (citing '553 patent, col. 1:53-59)) The specification of the '553 patent further describes the OTAPA process, as disclosed in IS-725-A, as a technology that "has been developed" to allow changes of specific parameters in a mobile station by wireless communication. ('553 patent, col. 1:35-41) Where, as here, "the specification admits the additional claim elements are well-understood, routine, and conventional, it will be difficult, if not impossible, for a patentee to show a genuine dispute" of fact. *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1371 (Fed. Cir. 2018). Regardless, Defendants correctly point out that claim 1 of the '553 patent "is not limited to mutual authentication using OTAPA or any other manner of generating random numbers," and the issue of whether OTAPA is prior art is therefore "neither outcome-determinative nor a fact issue that need[s] [to] be resolved at this stage." (D.I. 18 at 2) To the extent that Plaintiff proffers the expert declaration of Dr. Jacob Sharony in support of its position on the novelty of the OTAPA procedure, the court declines to consider matters outside the pleadings on a Rule 12 motion to dismiss. *See Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC*, 915 F.3d 743, 755 (Fed. Cir. 2019) (holding that district court did not abuse its discretion in declining to consider plaintiff's expert declaration on a motion to dismiss, particularly where the expert declaration was inconsistent with factual allegations made in the complaint).

operational parameter update process and a process of authentication using the generation of random numbers were previously included in the OTAPA process. ('553 patent, col. 1:35-52) The specification incorporates by reference PCT Application No. WO 98/41044, which describes a network validation scheme that “uses portions of a previously used authentication scheme” in which “the mobile station generates a random number” (*Id.*, col. 1:38-41; D.I. 11, Ex. B at 23:6-10) Although the known authentication method using the generation of random numbers was a one-way process that did not allow for mutual authentication, the specification explains that authentication of both the mobile station and the wireless communication network could still be achieved by authenticating the mobile station prior to the OTAPA process. ('553 patent, col. 1:53-54) (observing that “the network may first perform an authentication procedure of a mobile stations [sic] before the OTAPA process. . . .”). These known elements do not amount to a technological improvement. *See Ubisoft Entm't, S.A. v. Yousician Oy*, --- F. App'x ----, 2020 WL 3096369, at *3 (Fed. Cir. June 11, 2020) (holding that the nature of the asserted claims was not patent-eligible where “the patent itself makes clear that the claimed invention involves merely the application of conventional computer technology to common guitar instruction techniques.”).

Moreover, the efficiencies allegedly gained by combining these separate authentication steps into a mutual authentication process do not render the claim patent-eligible where, as here, claim 1 recites only results-based, functional language without articulating how to achieve the stated goal of mutual authentication in a non-abstract way. *See Two-Way Media Ltd. v. Comcast Cable Commc'ns*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (concluding that a patent claim reciting “generic functional language to achieve [the] purported solutions” without claiming “how the desired result is achieved” was abstract). Claim 1 states that the goal of mutual authentication

“is performed by generating at least one random number by each of the network and the mobile station.” (’553 patent, col. 8:56-58) But Plaintiff appears to concede that the claimed generation of a random number does not constitute an improvement to technology at step one. (D.I. 17 at 11) (“That claim 1 recites the generation of random numbers in one limitation does not alter the nature of claim 1 *as a whole*.” (emphasis in original)). Claim 1 describes the exchange of random numbers between the mobile station and the wireless communication network without a recitation of steps or rules for generating the random numbers or explaining how those random numbers achieve the claimed mutual authentication. (’553 patent, col. 8:44-58) In this regard, claim 1 of the ’553 patent lacks the “specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018).

Additional details explaining how the mutual authentication process is achieved are included in the specification, but these details are absent from claim 1. (’553 patent, cols. 3:30-8:34) The preferred embodiments describe the execution of the claimed methods in the context of the OTAPA procedure, which is not mentioned in claim 1. (*Id.*, cols. 3:30-8:58) Moreover, the specification disclaims any attempt to restrict the scope of claim 1 based on limitations found in the preferred embodiments:

The foregoing embodiments are merely exemplary and are not to be construed as limiting the present invention. The present teachings can be readily applied to other types of apparatuses. The description of the present invention is intended to be illustrative, and not to limit the scope of the claims. Many alternatives, modifications, and variations will be apparent to those skilled in the art.

(’553 patent, col 8:35-41) This disclaimer further undermines Plaintiff’s position that the operational parameters of claim 1 are limited to a specific type of protocol, the mobile station is a

specific type of device,³ and the wireless communication network is a specific technological environment in which the mutual authentication process occurs.⁴ (D.I. 17 at 11) Because it contains only functional, results-oriented limitations that offer no concrete solution to the problem of mutual authentication, claim 1 of the '553 patent amounts to an abstract idea. *See Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. July 20, 2018) (finding abstract a claim that “demands the production of a desired result . . . without any limitation on how to produce that result.”); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (observing that “essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101, especially in the area of using generic computer and network technology to carry out economic transactions”).

A comparison of claim 1 of the '553 patent to claims found by the Federal Circuit to be abstract supports this conclusion. In *Prism Technologies LLC v. T-Mobile USA, Inc.*, the Federal Circuit held that claims reciting the steps of “(1) receiving identity data from a device with a request for access to resources; (2) confirming the authenticity of the identity data associated with that device; (3) determining whether the device identified is authorized to access the resources requested; and (4) if authorized, permitting access to the requested resources”

³ In PCT Application No. WO 98/41044, which is incorporated by reference into the specification of the '553 patent, the claimed mobile station is defined broadly enough “to refer to any wireless communication device whether the device is mobile or fixed and whether used for the transmission of voice, data or facsimiles.” (D.I. 11, Ex. B at 1:14-16)

⁴ Plaintiff provides no support for its position that a wireless communication network is a specific technological environment. The case authorities suggest that a wireless communication network is generic and conventional, not specific and concrete. *See buySAFE v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.”); *see also Front Row Techs., LLC v. NBA Media Ventures, LLC*, 204 F. Supp. 3d 1190, 1278 (D.N.M. 2016) (finding abstract a patent claim reciting generic and conventional components such as “a wireless communications data network, authentication via a specific security code, [and] at least one remote hand held device[.]”).

amounted to the abstract idea of “providing restricted access to resources.” *Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App’x 1014, 1017 (Fed. Cir. 2017).⁵ Like the claim language at issue in *Prism*, claim 1 of the ’553 patent recites a method of authenticating data, and the generation of random numbers to achieve the mutual authentication in claim 1 of the ’553 patent is analogous to the verification of identity data by the authentication server claimed in the asserted patent in *Prism*. (’553 patent, col. 8:44-58) The Federal Circuit determined that the claimed method was abstract at step one because it lacked a “concrete, specific solution to a real-world problem.” *Prism*, 696 F. App’x at 1017. The same conclusion applies in the present case because claim 1 of the ’553 patent provides no specifics regarding steps or rules for generating the random numbers necessary to perform mutual authentication, nor does it explain how those random numbers achieve the claimed mutual authentication. (’553 patent, col. 8:44-58) Thus, the method described in claim 1 of the ’553 patent is consistent with the claims at issue in *Prism* which were found by the Federal Circuit to be abstract.

Plaintiff contends that this case is distinguishable from *Prism* because the ’553 patent is narrowly limited to the field of use of wireless mobile devices operating on a wireless network, whereas the asserted patent in *Prism* addressed the authentication of identity data more broadly. (D.I. 17 at 12) But limiting the claimed method to the technological environment of wireless devices and networks does not meaningfully narrow the field of use or otherwise render the

⁵ Plaintiff argues that the Federal Circuit’s decision in *Prism* is not applicable due to the procedural posture of the case because the patent eligibility determination was rendered after trial. (D.I. 17 at 11) But a review of the procedural history in *Prism* shows that no Section 101 argument was included in the Rule 12(b)(6) motion filed in May 2012, well before the Supreme Court’s decision in *Alice*. (D. Neb. C.A. No. 8:12-124, D.I. 27) Thus, the court in *Prism* had no occasion to consider patent eligibility at the pleading stage. The law is now well-established that patent eligibility is a threshold issue. *See Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

claim any less abstract. *See Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1348 (Fed. Cir. 2019) (finding that the claimed invention, which was limited to the technological environment of a wireless transmitter, was abstract); *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258-59 (Fed. Cir. 2016) (holding that claims restricting the wireless delivery of regional broadcast content only to cellphones were abstract). This is particularly true where, as here, the specification explains that the claimed mobile station and wireless communication network should be construed broadly and should not be limited to the embodiments and descriptions in the specification. ('553 patent, col. 8:36-42)

The Federal Circuit has also explained that “[t]he fact that an identifier can be used to make a process more efficient . . . does not necessarily render an abstract idea less abstract.” *Secured Mail Sols. LLC v. Universal Wilde*, 873 F.3d 905, 910 (Fed. Cir. 2017). Like the claims at issue in *Secured Mail*, which recited a method of electronic data verification using a unique numeric identifier or barcode, claim 1 of the '553 patent lacks specific details about how the random numbers are generated, why they are generated, or how the generation of those numbers enables mutual authentication. ('553 patent, col. 8:44-58) Instead, claim 1 is directed to the abstract process of generating and using random numbers for the purpose of mutual authentication similar to the abstract process of “communicating information about a mail object using a personalized marking” recited in *Secured Mail*. 873 F.3d at 911.

Following the completion of briefing on the pending motions, the Federal Circuit issued its decision in *Uniloc USA, Inc. v. LG Electronics USA, Inc.*, 957 F.3d 1303 (Fed. Cir. 2020), and Plaintiff submitted the decision as subsequent authority on May 6, 2020. (D.I. 20) In *Uniloc*, the Federal Circuit found patent-eligible claims directed to a reduction of latency experienced by parked secondary stations in communication systems. *Uniloc*, 957 F.3d at 1307. Specifically,

the Federal Circuit held that the addition of a data field to permit a primary station to simultaneously send inquiry messages and poll parked secondary stations amounted to a concrete improvement in the functionality of the claimed communication systems. *Id.* at 1307-09.

In contrast, claim 1 of the '553 patent is not “directed to a specific asserted improvement to the functionality of the [authentication procedure] itself” because the alleged improvements identified in the specification of the '553 patent are expressly tied to the OTAPA process, while the language of claim 1 is not restricted to any particular apparatus or protocol. ('553 patent, col. 8:36-58); *Uniloc*, 957 F.3d at 1309. This lack of specificity reduces claim 1 to “result-based functional language” that does not provide the means for achieving any purported technological improvement. *Two-Way Media*, 874 F.3d at 1337. A goal such as reducing latency or improving security “can be a non-abstract computer-functionality improvement,” but only if it is “done by a specific technique that departs from earlier approaches to solve a specific computer problem.” *Ancora Techs. v. HTC Am., Inc.*, 908 F.3d 1343, 1348-49 (Fed. Cir. 2018) (finding patent-eligible an improvement to computer storage and security using a specific technique in a specific, modifiable part of the BIOS memory). Claim 1 of the '553 patent does not satisfy these criteria. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (concluding that improvements to computer functionality recited in the specification must be captured by the claims).

B. Alice Step Two

The court next considers whether “the claimed elements—‘individually and as an ordered combination’—recite an inventive concept.” *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1316 (Fed. Cir. 2019) (quoting *Alice*, 573 U.S. at 217). This analysis requires consideration of “whether the combination of elements was well-understood, routine, and conventional at the time

of the invention.” *Exergen Corp. v. Kaz USA, Inc.*, 725 F. App’x 959, 963 (Fed. Cir. 2018). If the only alleged inventive concept in a claim involves the application of the abstract idea using “conventional and well-understood techniques[,]” then the claim as not been transformed into a patent-eligible application of an abstract idea. *Cellspin*, 927 F.3d at 1316 (internal quotation marks and citation omitted).

Defendants allege that claim 1 of the ’553 patent does not recite an inventive concept because elements such as the wireless network, mobile station, and parameter updating technology were known in the prior art, as were one-way wireless authentication protocols. (D.I. 11 at 14; D.I. 18 at 9) Absent inventive components or programming, Defendants argue there can be no ordered combination of claim elements amounting to an inventive concept that would render claim 1 patent-eligible. (D.I. 18 at 9)

In response, Plaintiff contends that claim 1 of the ’553 patent recites an inventive concept because it is confined to a particular application in a specific environment, and mutual authentication was an unconventional step at the time of the invention. (D.I. 17 at 14) According to Plaintiff, the method claimed in the ’553 patent is more secure, more efficient, and helps resolve network reliability issues compared to the prior art methods. (*Id.*)

For the reasons previously stated at § IV.A, *supra*, the specification of the ’553 patent establishes that one-way authentication protocols and the associated network elements required for the authentication process were known, as was the combination of these recited elements. (’553 patent, col. 1:24-46; D.I. 11, Ex. B at 8:27-9:3) Therefore, the combination of operation parameters, mobile stations, and wireless communication networks is not enough to render claim 1 patent eligible. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (finding ineligible at step two claims that did not require a new source or type of

information or new techniques for analyzing it). The added efficiencies allegedly gained through the mutual authentication process do not amount to an inventive concept because they result from the application of the abstract idea itself. *See BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (“[A] claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than the ineligible concept.”); *Intellectual Ventures I LLC v. Capital One Bank*, 792 F.3d 1363, 1367 (Fed. Cir. 2017) (“Nor, in addressing the second step of *Alice*, does claiming the improved speed or efficiency inherent with applying the abstract idea on a computer provide a sufficient inventive concept.”). Consequently, claim 1 of the ’553 patent lacks an inventive concept that would otherwise render it patent eligible.

IV. CONCLUSION

For the foregoing reasons, I recommend that the court GRANT Defendants’ motions to dismiss pursuant to Rule 12(b)(6). (C.A. No. 19-1161-RGA, D.I. 10; C.A. No. 19-1162-RGA, D.I. 10; C.A. No. 19-1163-RGA, D.I. 8)

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation. Fed. R. Civ. P. 72(b)(2). The objections and responses to the objections are limited to ten (10) pages each. The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the District Court. *See Sincavage v. Barnhart*, 171 F. App’x 924, 925 n.1 (3d Cir. 2006); *Henderson v. Carlson*, 812 F.2d 874, 878-79 (3d Cir. 1987).

The parties are directed to the court's Standing Order For Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the court's website, <http://www.ded.uscourts.gov>.

Dated: July 20, 2020



Sherry R. Fallon
UNITED STATES MAGISTRATE JUDGE